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PATENT

Atty. Docket No. 30788-16

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re Application of:

JOHN T. HURST, ET AL.

Serial No.: 09/784,843

Filed: February 15, 2001

For: PROGRAMMING CONTENT
DISTRIBUTION

GROUP ART UNIT: 2142

EXAMINER: DOUGLAS B. BLAIR

CONF. NO.: 3829

APPEAL BRIEF

ON APPEAL TO THE BOARD OF PATENT APPEALS AND INTERFERENCES

Mail Stop Appeal Brief - Patent
Commissioner for Patents
P.O. Box 1450
Alexandria, Virginia 22313-1450

Dear Sir:

Appellants in the above-captioned patent application appeal the final rejection of claims 1, 5, 7-9, 11, 12, 15, 17-19, 21, 23 and 25-33 set forth in the Office Action mailed July 6, 2007, a Notice of Appeal and request for one-month extension of time having been timely filed on November 5, 2007 (January 5, 2008, being a Saturday).

I. REAL PARTY IN INTEREST

The real parties in interest in this application are Avica Technology Corporation, pursuant to an assignment recorded on April 30, 2001, at reel 011758, frame 0908, and DTS, Inc., pursuant to an exclusive license agreement between Avica Technology Corporation and DTS, Inc.

II. RELATED APPEALS AND INTERFERENCES

Appellants are not aware of any related appeals, interferences or judicial proceedings.

III. STATUS OF CLAIMS

Claims 1, 5, 7-9, 11, 12, 15, 17-19, 21, 23 and 25-33 have been finally rejected and are the subject matter of this appeal. Claims 2-4, 6, 10, 13, 14, 16, 20, 22 and 24 have been canceled. In accordance with 37 C.F.R. § 1.192(c)(9), a copy of the claims involved in this appeal is included in the Claims Appendix attached hereto.

IV. STATUS OF THE AMENDMENTS

No amendment has been filed subsequent to the final rejection.

V. SUMMARY OF CLAIMED SUBJECT MATTER

The present invention concerns systems, methods and techniques for delivering and receiving programming content, such as movies, video games and other types of computer software. Generally speaking, programming content, divided into chunk files, together with a manifest file for describing how to execute and/or play the various

individual chunks, is sent or received using a combination of electronic transmission and delivery on a physical storage medium. Such multi-path hybrid delivery can be usefully employed, e.g., in connection with piracy prevention and other security applications, as well as for providing backup transmission redundancy.

Thus, independent claim 1 is directed to methods for use in delivering programming content. Initially, programming content is divided into smaller chunks of data (e.g., as described at page 2 lines 11-17, page 9 lines 8-16 and page 9 line 24 through page 12 line 18 of the Specification), the programming content including: (i) a software program and/or (ii) content for playing on an electronic device (e.g., as described at page 1 lines 12-15 of the Specification). A chunk file is created for each chunk of data (e.g., as described at page 2 lines 17-18 and page 7 lines 1-12 of the Specification) and a manifest file is generated, the manifest file including information describing how to execute and/or play the chunks of data (e.g., as described at page 2 lines 18-20 and 24-27, page 9 lines 17-19 and page 12 line 19 through page 15 line 16 of the Specification). Finally, the created chunk files and the generated manifest file are transmitted to a remote location (e.g., as described at page 16 lines 3-4 and original claim 2 of the Specification), with at least one of the files being transmitted electronically and at least one of the files being transmitted on a physical storage medium (e.g., as described at page 16 lines 3-4 and original claim 6 of the Specification).

Independent claims 11, 29 and 33 are directed to methods and apparatuses for use in receiving programming content, in which plural chunk files and a manifest file are received (e.g., as described at page 2 lines 21-23 and page 17 lines 29-31 of the Specification). The chunk files include chunks of data that together make up

programming content, the programming content including: (i) a software program and/or (ii) content for playing on an electronic device (e.g., as described at page 1 lines 12-15 of the Specification). The manifest file includes information describing how to execute and/or play the chunks of data (e.g., as described at page 3 line 33 through page 4 line 5 of the Specification). The chunks of data are stored (e.g., as described at page 2 lines 25-26 and page 17 lines 29-31 of the Specification) and are executed and/or played according to the information in the manifest file (e.g., as described at page 1 lines 6-8, page 2 lines 25-27, page 16 line 29 through page 17 line 2 and page 17 lines 16-28 of the Specification). At least one of the received chunk files is received electronically and at least one of the received chunk files is received on a physical storage medium (e.g., as described at page 16 lines 3-4 and original claim 6 of the Specification).

The means-plus-function elements of claim 33 correspond, e.g., to the following structure: (a) means for receiving - input device 16 and/or network interface board 18, (as depicted in Figure 1 and described on page 4 lines 20-33 of the Specification), and/or a computer-readable medium, a general-purpose computer or other computing device, or any combination of software, firmware and/or hardware (as described, e.g., at page 5 lines 10-17 and from page 19 line 27 through page 20 line 4 of the Specification); (b) means for storing - disc drives 14 (as depicted in Figure 1 and described on page 4 lines 11-28 of the Specification) and/or a computer-readable medium, a general-purpose computer or other computing device, or any combination of software, firmware and/or hardware (as described, e.g., at page 5 lines 10-17 and from page 19 line 27 through page 20 line 4 of the Specification); and (c) means for at least

one of executing or playing - digital video projector 32 (as depicted in Figure 1 and described on page 5 lines 1-4 of the Specification) and/or a computer-readable medium, a general-purpose computer or other computing device, or any combination of software, firmware and/or hardware (as described, e.g., at page 5 lines 10-17 and from page 19 line 27 through page 20 line 4 of the Specification).

VI. GROUNDS OF REJECTION TO BE REVIEWED ON APPEAL

Claims 1, 5, 9, 11, 12, 15, 19 and 25-33 stand rejected under 35 U.S.C. § 103(a) over U.S. Patent 6,795,092 (Nagai) in view of U.S. Patent Application Publication Number 2003/0023970 (Panabaker); and claims 7-8, 17-18, 21 and 23 stand rejected under § 103(a) over Nagai in view of Panabaker and RFC 1321 (Rivest).

VII. ARGUMENT

Authority Pertaining to Issues on Appeal

Obviousness Rejections Under 35 USC § 103

The Supreme Court has set forth the following general standard with respect to any determination of obviousness:

“Under § 103, the scope and content of the prior art are to be determined; differences between the prior art and the claims at issue are to be ascertained; and the level of ordinary skill in the pertinent art resolved. Against this background the obviousness or nonobviousness of the subject matter is determined. Such secondary considerations as commercial success, long felt but unsolved needs, failure of others, etc., might be utilized to give light to the circumstances surrounding the origin of the subject matter sought to be patented.”

Graham v. John Deere Co. of Kansas City, 383 U.S. 1, 17-18, 86 S. Ct. 684, 15 L. Ed. 2d 545 (1966), quoted approvingly by *KSR Int'l Co. v. Teleflex Inc.*, 127 S. Ct. 1727, 1734 (U.S. 2007).

When performing this analysis, all claim limitations must be considered. See, e.g., MPEP § 2143.01. At the same time, the analysis requires a determination as to whether the claimed invention “as a whole” would have been obvious just before the claimed invention was made to person of ordinary skill in the art. See, e.g., MPEP § 2142.

It is noted that, “rejections on obviousness cannot be sustained with mere conclusory statements...” MPEP § 2142, quoting *In re Kahn*, 441 F.3d 977, 988, 78 USPQ2d 1329, 1336 (Fed. Cir. 2006), which in turn was quoted approvingly by the Supreme Court in *KSR International Co. v. Teleflex Inc.*, 82 USPQ2d 1385, 1395-97 (2007). In addition, “impermissible hindsight must be avoided and the legal conclusion [regarding obviousness] must be reached on the basis of the facts gleaned from the prior art.” MPEP § 2142.

More specifically, “the examiner must provide evidence which as a whole shows that the legal determination sought to be proved (i.e., the reference teachings establish a *prima facie* case of obviousness) is more probable than not.” MPEP § 2142.

Finally, even where all of a claim’s limitations can be found in the prior art, the examiner must provide a convincing reason as to why one of ordinary skill in the art would have been prompted to combine such limitations in the same manner as recited in claim.

“Although common sense directs one to look with care at a patent application that claims as innovation is the combination of two known

devices according to their established functions, it can be important to identify a reason that would have prompted a person of ordinary skill in the relevant field to combine the elements in the way the claimed new invention does. This is so because inventions in most, if not all, instances rely upon building blocks long since uncovered, and claimed discoveries almost of necessity will be combinations of what, in some sense, is already known.”

KSR Int'l Co. v. Teleflex Inc., 127 S. Ct. 1727, 1741 (U.S. 2007).

Rejection Under § 103(a) Over Nagai in view of Panabaker

Claims 1, 9 and 25

Independent claim 1 is directed to a method for use in delivering programming content. Initially, programming content is divided into smaller chunks of data, the programming content including (i) a software program and/or (ii) content for playing on an electronic device. A chunk file is created for each chunk of data and a manifest file is generated, the manifest file including information describing how to execute and/or play the chunks of data. Finally, the created chunk files and the generated manifest file are transmitted to a remote location, with at least one of the files being transmitted electronically and at least one of the files being transmitted on a physical storage medium.

The foregoing combination of features is not disclosed or suggested by the applied art. For example, no permissible combination of Nagai and Panabaker would have disclosed or suggested at least the feature of transmitting to a remote location: chunk files into which programming content has been divided and a manifest file that describes how to execute and/or play the chunks of data, where at least one of the files is transmitted electronically and at least one of the files is transmitted on a physical storage medium.

In this regard, Nagai has been studied in detail, particularly the portions thereof cited by the Examiner. Although often very difficult to follow, as best understood by Appellants, Nagai appears to be mainly concerned with the creation and provision of a digest for a multimedia document that provides information pertaining to individual scenes detected within the multimedia document. See, e.g., column 5 lines 1-21 of Nagai. Presumably, by providing such a digest, the end user can determine whether any portions of the original document are relevant to his or her needs, without the necessity of accessing the entire document. See, e.g., the Abstract and column 1 lines 1-50 of Nagai.

In order to create the digest, Nagai apparently (1) begins with a multimedia document that includes different media files and reproduction timing data (as described, e.g., at column 5 lines 1-5 of Nagai), (2) reproduces the document by combining the different media according to the reproduction timing data (as described, e.g., at column 5 lines 37-57 of Nagai), (3) divides the document into scenes (as described, e.g., at column 5 lines 58-65 of Nagai), and then (4) selects and includes within the digest only the most representative scenes (as described, e.g., from column 5 line 66 through column 7 line 22 of Nagai). It appears that each of these representative scenes is represented in the digest by a still image (as described, e.g., at column 7 lines 12-18 of Nagai) in Nagai's first embodiment, and is represented by newly generated reproduction control information referring to the original media data sets in Nagai's second embodiment (as described, e.g., at column 10 lines 36-44 of Nagai).

The Examiner first asserts that column 5 lines 34-57 and Figure 4 of Nagai disclose the presently claimed features of: dividing programming content into smaller

chunks of data, where the programming content comprises at least one of (i) a software program or (ii) content for playing on an electronic device; creating a chunk file for each chunk of data, the chunk file including the chunk of data; and generating a manifest file that includes information describing how to execute or play the chunks of data.

In the Response filed April 27, 2007, Appellants stated their assumption that the Examiner is asserting that the presently recited "programming content" reads on Nagai's multimedia document, that the presently recited "chunk files" read on Nagai's individual media files (shown in Nagai's Figure 4), that the presently recited "chunks" read on the media data within those files, and that the presently recited "manifest file" reads on Nagai's reproduction control information (shown in Nagai's Figure 4). The Examiner apparently confirms this assumption in the present Office Action.

Even accepting this asserted mapping of the present claim limitations onto the above-referenced features of Nagai, several features of the present invention still would not be disclosed or suggested by any permissible combination of Nagai and Panabaker.

For instance, there is no indication in Nagai that its purported "chunk files" (i.e., the individual media files into which its multimedia document is divided) are transmitted to any remote location. In this regard, the Examiner asserts that column 5, lines 24-33 of Nagai discloses transmission of Nagai's "chunk files" and "manifest file". However, that portion of Nagai only appears to discuss the structure of an ordinary general-purpose computer, as illustrated in Nagai's Figure 3. It says nothing at all about transmitting Nagai's individual media files together with its reproduction control information to any remote location.

In fact, it appears that the main purpose of Nagai's technique is to avoid having to provide an entire multimedia document. Accordingly, even if transmission to a remote location somehow were to be suggested, all that likely would be transmitted, based on Nagai's teachings, is the digest and, perhaps, one or two short scenes requested by a user. Transmitting any significant portion of the media files into which Nagai's multimedia document has been divided almost certainly would have defeated Nagai's purpose in generating the digest in the first place.

The present claim language requires transmission of the chunk files into which programming content has been divided to a remote location. No reasonable construction of this claim limitation would encompass a situation in which small selected portions of programming content are transmitted to a remote location, even if any remote transmission were in fact contemplated in Nagai.

In response to similar points previously made by Appellants, in the present Office Action the Examiner asserts, "The applicant has not explained how the media sets taught by Nagai do not read on the chunk files and how the reproduction control information does not read on the manifest file." This statement misses Appellants' point. Appellants are not arguing that the Examiner's mapping is incorrect, but instead are pointing out that if the features of independent claim 1 are read onto those aspects of Nagai's system asserted by the Examiner, then other features of the claim would not have been disclosed or suggested by Nagai, either alone or in combination with Panabaker. In fact, as noted above, Nagai actually would have taught away from transmitting the chunk files into which programming content has been divided to a remote location.

In addition, the Examiner acknowledges that Nagai does not teach the present feature that, when transmitting chunk files that make up programming content and a manifest file that describes how to execute and/or play the chunks of data, at least one of the files is transmitted electronically and at least one of the files is transmitted on a physical storage medium.

To make up for this deficiency, the Examiner cites Panabaker. Specifically, the Examiner asserts that Panabaker, "teaches a method of distributing programming content which includes a manifest file, in which some files are transmitted electronically and some files are transmitted on a physical medium (paragraph 59)."

At the outset, it is noted that Panabaker discusses a system in which, in addition to standard audio/video programming, enhanced programming content also is made available to the end user. See, e.g., Panabaker's Abstract. The enhanced programming content is presented in accordance with a defined schema and supplements the standard audio/video programming, typically providing for some interactive capabilities. See, e.g., paragraph [0046] of Panabaker.

In the principal embodiment discussed in Panabaker, an encoder module 212 combines the original audio/video programming with the enhanced programming content (as interpreted from the defined schema), and then the composite content is transmitted to the end user. See, e.g., paragraph [0055] of Panabaker.

In addition, two alternate embodiments of Panabaker's technique are briefly mentioned in paragraph [0059] of Panabaker. In the first, the encoder module 212 is omitted and the end user's receiver itself inserts the enhanced programming content into the audio/video programming. As noted in paragraph [0059] of Panabaker, such an

embodiment might be used, e.g., where the audio/video programming and the enhanced content are stored together on a CD or DVD.

In the second alternate embodiment described in paragraph [0059], "the enhanced programming experience can be delivered to receiver module 216a-216n separately from the audio/video programming." That is, the enhanced programming information (including both content and schema) is delivered in a different manner than the underlying audio/video programming. Apparently, the enhanced programming information may be delivered by e-mail or upon a physical storage device, while the underlying audio/video programming is broadcast.

Each of Panabaker's embodiments is significantly different than the combination of features recited in Appellants' independent claim 1. As noted above, independent claim 1 recites the feature of transmitting chunk files into which programming content has been divided and a manifest file that describes how to execute and/or play the chunks of data, where at least one of the files is transmitted electronically and at least one of the files is transmitted on a physical storage medium.

The Examiner does not indicate which particular component of Panabaker is alleged to correspond to the presently recited manifest file. However, the only feature of Panabaker that even arguably corresponds to the presently recited manifest file is Panabaker's schema file. Appellants made this assumption in a previous Response, and the Examiner has not responded, so Appellants continue to assume that is what the Examiner is asserting. Such a reading is believed to be inconsistent with the present claim language, because it appears that in Panabaker either the schema file never is delivered to the end user (because it is used only by encoder 212) or the schema file is

delivered in exactly the same manner as the enhanced programming content to which it pertains.

It is noted that Panabaker's schema file only appears to control the supplemental or enhanced programming content; the underlying audio/video content apparently has nothing whatsoever to do with Panabaker's schema file, but instead is played completely independently. Panabaker discloses that the enhanced programming information (both content and schema) may be delivered in a different manner than the underlying audio/video programming.

However, this feature is clearly different than the presently recited feature of dividing programming content into chunks, generating a manifest file, and then transmitting the chunk files and manifest files to a remote location, with at least one of the files being transmitted electronically and at least one of the files being transmitted on a physical storage medium. In addition, there appears to be no indication that Panabaker's enhanced programming content (to which its schema file pertains) is even divided into multiple chunks.

In short, Panabaker at most discloses that additional or supplemental programming content may be delivered in a different manner than the underlying programming content. However, it says nothing at all about dividing any programming content into different chunks and then transmitting those chunks, together with a manifest file describing how to execute or play the chunks, in different ways. As a result, Panabaker clearly does not say anything about transmitting such files both electronically and on a physical storage medium, as presently recited.

Lacking the above-referenced features of the invention, no permissible combination of Nagai and Panabaker could have suggested the present invention as recited in independent claim 1.

In addition, Nagai and Panabaker are directed to significantly different problems. As noted above, Nagai concerns the creation and delivery of a digest for the purpose of providing an overview of the content within a multimedia document. Panabaker concerns the delivery of enhanced programming content, primarily for the purpose of providing an interactive experience to the end user. There is nothing in either reference that would have motivated one of ordinary skill in the art to combine the teachings of these two very distinct references in any manner whatsoever, much less in any way that would have resulted in the present invention. Attempting to combine unrelated features from Nagai and Panabaker fails for at least the reasons set forth above.

The Examiner asserts,

“It would have been obvious to one of ordinary skill in the Computer Networking art at the time of the invention to combine the teachings of Nagai regarding a programming content delivery method with the teachings of Panabaker regarding specific delivery method [sic] for programming content because sending a manifest file electronically allows quicker updates of presentation data.”

First, it is noted that Nagai says nothing at all about delivering programming content, but rather about generating and providing just a digest of programming content. Second, Panabaker might generally teach that different content can be delivered in different ways, but neither it nor Nagai says anything at all about the presently recited feature of transmitting to a remote location: chunk files into which programming content has been divided and a manifest file that describes how to execute and/or play the chunks of data, where at least one of the files is transmitted electronically and at least one of the

files is transmitted on a physical storage medium. Third, it is not clear that the above statement is correct; ordinarily, reading a file from a storage medium is much faster than receiving it across a network, such as the Internet. Fourth, even if this statement were true, it is unclear how such an observation would have motivated one of ordinary skill to combine any relevant feature of Panabaker with the features of Nagai in order to achieve the present invention; the Examiner has provided no specific arguments as to how one of ordinary skill would have been motivated to modify Nagai's approach based on anything disclosed in Panabaker.

The Examiner asserts, "Panabaker shows that transmitting data over either a network or "physical medium" is arbitrary and a matter of preference and therefore completely obvious." Irrespective of whether or not that statement is correct for individual kinds of data, nothing in Panabaker discloses or suggests the hybrid approach to delivering programming content, as presently claimed, and even the Examiner has not alleged that it does.

Finally, the Examiner argues,

"applicant's claims are broad enough to read solely on a network. For example, transmitting electronically could be on a network and transmitting on a physical storage medium could be over a network by considering the network to be the physical storage medium."

However, no reasonable construction of the clause "transmitted on a physical storage medium", as presently recited, would encompass transmission over a network. In particular, the Examiner has cited nothing to indicate that one of ordinary skill in the art would have considered a network to be a "physical storage medium", rather than a system for transient transmission of signals, as is generally understood.

In view of the foregoing remarks, it is clear that any permissible combination of Nagai and Panabaker still would have lacked significant features of the present invention. In addition, there would have been no motivation to combine Nagai and Panabaker in any manner that is related to the present invention, much less in any manner that would have suggested the present invention.

Accordingly, independent claim 1, together with its dependent claims 9 and 25, is believed to be allowable over the applied art.

Claims 11, 19, 27, 29, 31 and 33

Independent claims 11, 29 and 33 are directed to a method and apparatuses for use in receiving programming content, in which plural chunk files and a manifest file are received. The chunk files include chunks of data that together make up programming content, the programming content, in turn, including (i) a software program and/or (ii) content for playing on an electronic device. The manifest file includes information describing how to execute and/or play the chunks of data. The chunks of data are stored and are executed and/or played according to the information in the manifest file. At least one of the received chunk files is received electronically and at least one of the received chunk files is received on a physical storage medium.

The foregoing combination of features is not disclosed or suggested by the applied art. For example, no permissible combination of Nagai and Panabaker is seen to disclose or to suggest at least the features of receiving chunk files that together make up programming content, together with a manifest file that includes information describing how to execute and/or play the chunks of data, where at least one of the received chunk files is received electronically and at least one of the received chunk

files is received on a physical storage medium, and executing and/or playing chunks of data within the chunk files according to the information in the manifest file.

In this regard, Nagai has been studied in detail, and particularly the portions thereof cited by the Examiner. Although often very difficult to follow, as best understood by Appellants, Nagai appears to be mainly concerned with the creation and provision of a digest for a multimedia document that provides information pertaining to individual scenes detected within the multimedia document. See, e.g., column 5 lines 1-21 of Nagai. Presumably, by providing such a digest, the end user can determine whether any portions of the original document are relevant to his or her needs, without the necessity of accessing the entire document. See, e.g., the Abstract and column 1 lines 1-50 of Nagai.

In order to create the digest, Nagai apparently (1) begins with a multimedia document that includes different media files and reproduction timing data (as described, e.g., at column 5 lines 1-5 of Nagai), (2) reproduces the document by combining the different media according to the reproduction timing data (as described, e.g., at column 5 lines 37-57 of Nagai), (3) divides the document into scenes (as described, e.g., at column 5 lines 58-65 of Nagai), and then (4) selects and includes within the digest only the most representative scenes (as described, e.g., from column 5 line 66 through column 7 line 22 of Nagai). It appears that each of these representative scenes is represented in the digest by a still image (as described, e.g., at column 7 lines 12-18 of Nagai) in Nagai's first embodiment, and is represented by newly generated reproduction control information referring to the original media data sets in Nagai's second embodiment (as described, e.g., at column 10 lines 36-44 of Nagai).

The Examiner does not expressly assert that Nagai discloses the feature of receiving plural chunk files and the manifest file, as presently recited. Instead, the Examiner asserts that column 5 lines 34-57 and Figure 4 of Nagai disclose: dividing programming content into smaller chunks of data, where the programming content comprises at least one of (i) a software program or (ii) content for playing on an electronic device; creating a chunk file for each chunk of data, the chunk file including the chunk of data; and generating a manifest file that includes information describing how to execute or play the chunks of data.

In the Response filed April 27, 2007, Appellants stated their assumption that the Examiner is asserting that the presently recited "programming content" reads on Nagai's multimedia document, that the presently recited "chunk files" read on Nagai's individual media files (shown in Nagai's Figure 4), that the presently recited "chunks" read on the media data within those files, and that the presently recited "manifest file" reads on Nagai's reproduction control information (shown in Nagai's Figure 4). The Examiner apparently confirms this assumption in the present Office Action.

Even accepting this asserted mapping of the present claim limitations onto the above-referenced features of Nagai, several features of the present invention still would not be disclosed or suggested by any permissible combination of Nagai and Panabaker.

For instance, there is no indication in Nagai that its purported "chunk files" (i.e., the individual media files into which its multimedia document is divided) are received by any entity, much less received in the manner presently recited, and the Examiner has not expressly asserted that any such reception takes place in Nagai. Instead, the Examiner asserts that column 5, lines 24-33 of Nagai discloses transmission of Nagai's

“chunk files” and “manifest file”. However, even that portion of Nagai only appears to discuss the structure of an ordinary general-purpose computer, as illustrated in Nagai’s Figure 3. It says nothing at all about receiving Nagai’s individual media files together with its reproduction control information.

Rather, it appears that Nagai’s media files already exist locally and are simply used locally to generate Nagai’s digest. Similarly, the reproduction timing data for Nagai’s original multimedia document also appears to already exist locally and is simply used locally to reconstruct the document for the purpose of identifying scenes (as described, e.g., at column 5 lines 37-57 of Nagai).

In the present Office Action the Examiner asserts, “The applicant has not explained how the media sets taught by Nagai do not read on the chunk files and how the reproduction control information does not read on the manifest file.” This statement misses Appellants’ point. Appellants are not arguing that the Examiner’s mapping is incorrect, but instead are pointing out that if the features of the present independent claims are read onto those aspects of Nagai’s system asserted by the Examiner, then other features of such claims would not have been disclosed or suggested by Nagai, either alone or in combination with Panabaker.

In addition, the Examiner apparently acknowledges that Nagai does not teach the present claims’ feature that at least one of the received chunk files is received electronically and at least one of the received chunk files is received on a physical storage medium.

To make up for this deficiency, the Examiner cites Panabaker. Specifically, the Examiner asserts that Panabaker, “teaches a method of distributing programming

content which includes a manifest file, in which some files are transmitted electronically and some files are transmitted on a physical medium (paragraph 59)."

At the outset, it is noted that Panabaker discusses a system in which, in addition to standard audio/video programming, enhanced programming content also is made available to the end user. See, e.g., Panabaker's Abstract. The enhanced programming content is presented in accordance with a defined schema and supplements the standard audio/video programming, typically providing for some interactive capabilities. See, e.g., paragraph [0046] of Panabaker.

In the principal embodiment discussed in Panabaker, an encoder module 212 combines the original audio/video programming with the enhanced programming content (as interpreted from the defined schema), and then the composite content is transmitted to the end user. See, e.g., paragraph [0055] of Panabaker.

In addition, two alternate embodiments of Panabaker's technique are briefly mentioned in paragraph [0059] of Panabaker. In the first, the encoder module 212 is omitted and the end user's receiver itself inserts the enhanced programming content into the audio/video programming. As noted in paragraph [0059] of Panabaker, such an embodiment might be used, e.g., where the audio/video programming and the enhanced content are stored together on a CD or DVD.

In the second alternate embodiment described in paragraph [0059], "the enhanced programming experience can be delivered to receiver module 216a-216n separately from the audio/video programming." That is, the enhanced programming information (including both content and schema) is delivered in a different manner than the underlying audio/video programming. Apparently, the enhanced programming

information may be delivered by e-mail or upon a physical storage device, while the underlying audio/video programming is broadcast.

Each of Panabaker's embodiments is significantly different than the combination of features recited in Appellants' present independent claims. As noted above, the present claims recite the feature of receiving chunk files that together make up programming content, together with a manifest file that includes information describing how to execute and/or play the chunks of data, where at least one of the received chunk files is received electronically and at least one of the received chunk files is received on a physical storage medium.

The Examiner does not indicate which particular component of Panabaker is alleged to correspond to the presently recited manifest file. However, the only feature of Panabaker that even arguably corresponds to the presently recited manifest file is Panabaker's schema file. Appellants made this assumption in a previous Response, and the Examiner has not responded, so Appellants continue to assume that is what the Examiner is asserting. Such a reading is believed to be inconsistent with the present claim language, because it appears that in Panabaker either the schema file never is with received (because it is used only by encoder 212) or the schema file is received in exactly the same manner as the enhanced programming content to which it pertains.

It is noted that Panabaker's schema file only appears to control the supplemental or enhanced programming content; the underlying audio/video content apparently has nothing whatsoever to do with Panabaker's schema file, but instead is played completely independently. Panabaker discloses that the enhanced programming

information (both content and schema) may be delivered in a different manner than the underlying audio/video programming.

However, this feature is clearly different than the presently recited feature of receiving chunk files that together make up programming content, together with a manifest file that includes information describing how to execute and/or play the chunks of data, where at least one of the received chunk files is received electronically and at least one of the received chunk files is received on a physical storage medium. In addition, there appears to be no indication that Panabaker's enhanced programming content (to which its schema file pertains) is even comprised of multiple chunks.

In short, Panabaker at most discloses that additional or supplemental programming content may be received in a different manner than the underlying programming content. However, it says nothing at all about receiving any programming content in different chunks, together with a manifest file describing how to execute or play the chunks. As a result, Panabaker clearly does not say anything about receiving such files both electronically and on a physical storage medium, as presently recited.

Lacking the above-referenced features of the invention, no permissible combination of Nagai and Panabaker could have suggested the present invention as recited in the present independent claims.

In addition, Nagai and Panabaker are directed to significantly different problems. As noted above, Nagai concerns the creation and delivery of a digest for the purpose of providing an overview of the content within a multimedia document. Panabaker concerns the delivery of enhanced programming content, primarily for the purpose of providing an interactive experience to the end user. There is nothing in either reference

that would have motivated one of ordinary skill in the art to combine the teachings of these two very distinct references in any manner whatsoever, much less in any way that would have resulted in the present invention. Attempting to combine unrelated features from Nagai and Panabaker fails for at least the reasons set forth above.

The Examiner asserts,

"It would have been obvious to one of ordinary skill in the Computer Networking art at the time of the invention to combine the teachings of Nagai regarding a programming content delivery method with the teachings of Panabaker regarding specific delivery method [sic] for programming content because sending a manifest file electronically allows quicker updates of presentation data."

First, it is noted that Nagai says nothing at all about receiving programming content, but rather about generating and providing just a digest of programming content. Second, Panabaker might generally teach that different content can be received in different ways, but neither it nor Nagai says anything about the presently recited feature of receiving chunk files that together make up programming content, together with a manifest file that includes information describing how to execute and/or play the chunks of data, where at least one of the received chunk files is received electronically and at least one of the received chunk files is received on a physical storage medium. Third, it is not clear that the above statement is correct; ordinarily, reading a file from a storage medium is much faster than receiving it across a network, such as the Internet. Fourth, even if this statement were true, it is unclear how such an observation would have motivated one of ordinary skill to combine any relevant feature of Panabaker with the features of Nagai in order to achieve the present invention; the Examiner has provided no specific arguments as to how one of ordinary skill would have been motivated to modify Nagai's approach based on anything disclosed in Panabaker.

The Examiner asserts, "Panabaker shows that transmitting data over either a network or "physical medium" is arbitrary and a matter of preference and therefore completely obvious." Irrespective of whether or not that statement is correct for individual kinds of data, nothing in Panabaker discloses or suggests the hybrid approach to receiving programming content, as presently claimed, and even the Examiner has not alleged that it does.

Finally, the Examiner argues,

"applicant's claims are broad enough to read solely on a network. For example, transmitting electronically could be on a network and transmitting on a physical storage medium could be over a network by considering the network to be the physical storage medium."

However, no reasonable construction of the clause "received on a physical storage medium", as presently recited, would encompass reception over a network. In particular, the Examiner has cited nothing to indicate that one of ordinary skill in the art would have considered a network to be a "physical storage medium", rather than a system for transient transmission of signals, as is generally understood.

In view of the foregoing remarks, it is clear that any permissible combination of Nagai and Panabaker still would have lacked significant features of the present invention. In addition, there would have been no motivation to combine Nagai and Panabaker in any manner that is related to the present invention, much less in any manner that would have suggested the present invention.

Accordingly, independent claims 11, 29 and 33, together with their dependent claims 19, 27 and 31, are believed to be allowable over the applied art.

Claims 5 and 15

Claim 5 depends from independent claim 1 and claim 15 depends from independent claim 11 (discussed above). Each recites the further limitation that the chunk files are distributed across a set of physical storage media, and each of the physical storage media in the set contains the manifest file. This additional feature of the invention is not disclosed or suggested by the applied art.

The Examiner points to paragraph [0027] of Panabaker as allegedly showing this feature of the invention. However, that portion of Panabaker has been studied in detail and is only seen to generally discuss characteristics of a “home entertainment system”. It is not believed to say anything at all about this feature of the invention.

For these additional reasons, claims 5 and 15 are believed to be allowable over the applied art.

Claims 12 and 30

Claim 12 depends from independent claim 11, and claim 30 depends from independent claim 29 (discussed above). Each recites the further limitation that the chunks of data (received in the manner discussed above in connection with such independent claims) are stored such that each chunk remains separately identifiable. This additional feature of the invention is not disclosed or suggested by the applied art.

The Examiner asserts, “the SMIL specification [apparently referring to Nagai] teaches a method wherein the chunks of data are stored such that each chunk remains separately identifiable (multimedia files in Figure 4).” However, Figure 4 of Nagai merely illustrates that Nagai’s media files (for its multimedia document) are themselves separate files. It does not indicate that any files are received in the manner presently

recited, or that chunks within them are then stored such that each chunk remains separately identifiable.

For these additional reasons, claims 12 and 30 are believed to be allowable over the applied art.

Claims 26, 28 and 32

Claim 26 ultimately depends from independent claim 1, claim 28 ultimately depends from independent claim 11, and claim 32 ultimately depends from independent claim 29 (discussed above). Each recites the further limitation that the programming content divided into the chunks of data is a digital feature-length theater-quality motion picture.

This additional feature of the invention is not disclosed or suggested by the applied art. In fact, Examiner does not even allege that Nagai, Panabaker or any permissible combination of these two references would have disclosed or suggested this feature of the invention.

For these additional reasons, claims 26, 28 and 32 are believed to be allowable over the applied art.

Rejection Under § 103(a) Over Nagai in view of Panabaker and Rivest

Claims 7 and 17

Claim 7 depends from independent claim 1 and claim 17 depends from independent claim 11 (discussed above). Each recites the further limitation that the manifest file includes a block message digest for verifying integrity of the programming

content. This additional feature of the invention is not disclosed or suggested by the applied art.

The Examiner simply asserts, "Rivest teaches the use of a message digest for verifying integrity of data (See executive summary)." In response, it is first noted that neither Rivest's executive summary, nor anything else in Rivest, appears to talk about using the MD5 digest described therein for verifying data integrity. Second, even if Rivest generally disclosed the use of the MD5 digest for verifying data integrity, nothing in Rivest would have disclosed or suggested including a block message digest for verifying integrity of the presently recited programming content within the presently recited manifest file, e.g., rather than providing some other kind(s) of digest or providing such digest(s) somewhere else.

For these additional reasons, claims 7 and 17 are believed to be allowable over the applied art.

Claims 8 and 18

Claim 8 depends from independent claim 1 and claim 18 depends from independent claim 11 (discussed above). Each recites the further limitation that the manifest file includes, for each chunk of data, a message digest for verifying the integrity of such chunk of data. This additional feature of the invention is not disclosed or suggested by the applied art.

The Examiner simply asserts, "Rivest teaches the use of a message digest for verifying integrity of data (See executive summary)." In response, it is first noted that neither Rivest's executive summary, nor anything else in Rivest, appears to talk about using the MD5 digest described therein for verifying data integrity. Second, even if

Rivest generally disclosed the use of the MD5 digest for verifying data integrity, nothing in Rivest would have disclosed or suggested including within the presently recited manifest file, for each chunk of data, a message digest for verifying the integrity of such chunk of data, e.g., rather than providing some other kind(s) of digest or providing such digest(s) somewhere else.

For these additional reasons, claims 8 and 18 are believed to be allowable over the applied art.

Claims 21 and 23

Claim 21 depends from independent claim 1 and claim 23 depends from independent claim 11 (discussed above). Each recites the further limitation that the chunk file for each chunk of data also includes a message digest for verifying integrity of such chunk of data. This additional feature of the invention is not disclosed or suggested by the applied art.

The Examiner simply asserts, "Rivest teaches the use of a message digest for verifying integrity of data (See executive summary)." In response, it is first noted that neither Rivest's executive summary, nor anything else in Rivest, appears to talk about using the MD5 digest described therein for verifying data integrity. Second, even if Rivest generally disclosed the use of the MD5 digest for verifying data integrity, nothing in Rivest would have disclosed or suggested including within the chunk file for each chunk of data a message digest for verifying integrity of such chunk of data, e.g., rather than providing some other kind(s) of digest or providing such digest(s) somewhere else.

For these additional reasons, claims 21 and 23 are believed to be allowable over the applied art.

VIII. CONCLUDING REMARKS

As Appellants have shown above, for a number of reasons, nothing in the cited references discloses, teaches, or suggests the invention recited by the claims on appeal. Appellants therefore respectfully submit that the claimed invention is patentably distinct over the applied art.

In view of the foregoing remarks, Appellants respectfully request that the rejection of claims 1, 5, 9, 11, 12, 15, 19 and 25-33 be reversed and a Notice of Allowance issued.

Respectfully submitted,

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Dated: January 7, 2008

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CLAIMS APPENDIX

Claims on Appeal

1. A method for use in delivering programming content, said method comprising:
 - (a) dividing programming content into smaller chunks of data, wherein said programming content comprises at least one of (i) a software program or (ii) content for playing on an electronic device;
 - (b) creating a chunk file for each chunk of data, said chunk file including said chunk of data;
 - (c) generating a manifest file that includes information describing how to at least one of execute or play the chunks of data; and
 - (d) transmitting the chunk files created in step (b) and the manifest file generated in step (c) to a remote location,wherein at least one of the files transmitted in step (d) is transmitted electronically and at least one of the files transmitted in step (d) is transmitted on a physical storage medium.

2-4 (Canceled)

5. A method according to claim 1, wherein the chunk files are distributed across a set of physical storage media, and wherein each of said physical storage media in the set contains the manifest file.

6. (Canceled)

7. A method according to claim 1, wherein the manifest file includes a block message digest for verifying integrity of the programming content.

8. A method according to claim 1, wherein the manifest file includes, for each chunk of data, a message digest for verifying the integrity of said each chunk of data.

9. A method according to claim 1, wherein the manifest file identifies each chunk of data in the programming content.

10. (Canceled)

11. A method for use in receiving programming content, said method comprising:

(a) receiving plural chunk files and a manifest file, the chunk files including chunks of data that together make up programming content, the programming content comprising at least one of (i) a software program or (ii) content for playing on an electronic device, and the manifest file including information describing how to at least one of execute or play the chunks of data;

(b) storing the chunks of data; and

(c) at least one of executing or playing the chunks of data according to the information in the manifest file,

wherein at least one of the chunk files received in step (a) is received electronically and at least one of the chunk files received in step (a) is received on a physical storage medium.

12. A method according to claim 11, wherein in step (b) the chunks of data are stored such that each chunk remains separately identifiable.

13-14 (Canceled)

15. A method according to claim 11, wherein the chunk files are distributed across a set of physical storage media, and wherein each of said physical storage media in the set contains the manifest file.

16. (Canceled)

17. A method according to claim 11, wherein the manifest file includes a block message digest for verifying integrity of the programming content.

18. A method according to claim 11, wherein the manifest file includes, for each chunk of data, a message digest for verifying the integrity of said each chunk of data.

19. A method according to claim 11, wherein the manifest file identifies each chunk of data in the programming content.

20. (Canceled)

21. A method according to claim 1, wherein the chunk file for each chunk of data also includes a message digest for verifying integrity of said chunk of data.

22. (Canceled)

23. A method according to claim 11, wherein each chunk file also includes a message digest for verifying integrity of the chunk of data within the chunk file.

24. (Canceled)

25. A method according to claim 1, wherein the programming content divided into the chunks of data is a motion picture.

26. A method according to claim 25, wherein the motion picture is a digital feature-length theater-quality motion picture.

27. A method according to claim 11, wherein the programming content made up of the chunks of data is a motion picture.

28. A method according to claim 27, wherein the motion picture is a digital feature-length theater-quality motion picture.

29. An apparatus for use in receiving programming content, said apparatus comprising:

a processor for executing stored program instruction steps; and

a memory connected to the processor for storing the program instruction steps,

wherein the program instruction steps include:

(a) receiving plural chunk files and a manifest file, the chunk files including chunks of data that together make up programming content, the programming content comprising at least one of (i) a software program or (ii) content for playing on an electronic device, and the manifest file including information describing how to at least one of execute or play the chunks of data;

(b) storing the chunks of data; and

(c) at least one of executing or playing the chunks of data according to the information in the manifest file, and

wherein at least one of the chunk files received in step (a) is received electronically and at least one of the chunk files received in step (a) is received on a physical storage medium.

30. An apparatus according to claim 29, wherein in step (b) the chunks of data are stored such that each chunk remains separately identifiable.

31. An apparatus according to claim 29, wherein the programming content made up of the chunks of data is a motion picture.

32. An apparatus according to claim 31, wherein the motion picture is a digital feature-length theater-quality motion picture.

33. An apparatus for use in receiving programming content, said apparatus comprising:

(a) means for receiving plural chunk files and a manifest file, the chunk files including chunks of data that together make up programming content, the programming content comprising at least one of (i) a software program or (ii) content for playing on an electronic device, and the manifest file including information describing how to at least one of execute or play the chunks of data;

(b) means for storing the chunks of data; and

(c) means for at least one of executing or playing the chunks of data according to the information in the manifest file,

wherein at least one of the chunk files received in step (a) is received electronically and at least one of the chunk files received in step (a) is received on a physical storage medium.

EVIDENCE APPENDIX

None.

RELATED PROCEEDINGS APPENDIX

None.